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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,643	05/15/2001	Takatoshi Tsujimura	JP920000112US1	8744
877	7590	12/05/2003	EXAMINER	
IBM CORPORATION, T.J. WATSON RESEARCH CENTER P.O. BOX 218 YORKTOWN HEIGHTS, NY 10598			COLEMAN, WILLIAM D	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s) (2)	
	09/681,643	TSUJIMURA ET AL.	
	Examiner	Art Unit	
	W. David Coleman	2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed September 11, 2003 have been fully considered but they are not persuasive.

Applicant contends that the prior art rejection of Ohnuma et al, U.S. Patent 6,072,193 in view of Gardner et al., U.S. Patent 6,066,519 fails to teach Applicants' invention because Applicant has a different reasoning for depositing an oxide on the substrate walls. Applicant further contends that the oxide on the inner walls is to prevent P-containing chemical species, such as phosphine (PH₃), from sticking to the chamber walls.

In response to applicant's argument that the inner walls coated with an oxide prevents phosphine from sticking to the chamber walls, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the inner walls coated with an oxide prevents phosphine from sticking to the chamber walls) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Please note that the amendment filed September 11, 2003 does not further limit nor distinguish Applicants claimed invention because the prior art references teaches forming an oxide film, prior to forming a source/drain region (see bottom gate tft, figures 9A-10D)

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohnuma et al., U.S. Patent 6,072,193 in view of Gardner et al., U.S. Patent 6,066,519.

3. Pertaining to claims 1 and 2, Ohnuma discloses a semiconductor process substantially as claimed. See **FIGS. 1A-2D**, where Ohnuma teaches a manufacturing method of an active matrix device (column 17, line 62) including a top gate type TFT, which comprises a process of forming the top gate type TFT, wherein the process of forming the top gate type TFT includes the steps of:

arranging a substrate **101** having source **125** and drain electrodes **126** formed therein in the processing chamber; doping the source and drain electrodes with P (phosphorous), (column 3, lines 51-54); and forming an a-Si layer **103** and a gate insulating film **104** in the processing chamber; and

wherein forming the oxide film on the inner wall of the CVD processing chamber is performed before doping the source and drain electrodes with P. However, Ohnuma fails to disclose

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forming an oxide film on an inner wall of a CVD processing chamber. Gardner teaches forming an oxide on an inner wall of a CVD processing chamber (column 6, lines 8-14). In view of Gardner, it would have been obvious to one of ordinary skill in the art because when forming a gate dielectric residual oxide forms on the chamber walls (column 6, lines 10-12).

4. Pertaining to claim 2, Ohnuma fails to disclose removing the oxide film from the inner wall after the step of forming the a-Si layer and the gate insulating layer. Gardner teaches the step of removing oxide between runs. In view of Gardner, it would have been obvious to one of ordinary skill in the art to remove oxide from the chamber walls after the step of forming the a-Si layer and the gate insulating film because the a silicon gate dielectric layer may be formed in a highly controlled manner (column 6, lines 21-23).

5. Pertaining to claim 3, Ohnuma teaches a manufacturing method of an active matrix device according to claim 1,

wherein the oxide film contains SiO_x.

6. Pertaining to claim 4, Ohnuma teaches a manufacturing method of an active matrix device according to claim 1, wherein the active matrix device is a liquid crystal display (column 17, line 62).

7. Pertaining to claim 5, Ohnuma teaches a manufacturing method of an active matrix device according to claim 1, wherein the active matrix device is an electroluminescence display (column 17, line 62).

8. Pertaining to claim 6, Ohnuma teaches a manufacturing method of an active matrix device according to claim 2, wherein the oxide film contains SiO_x.

9. Pertaining to claim 7, Ohnuma teaches a manufacturing method of an active matrix device according to claim 2, wherein the active matrix device is a liquid crystal display.
10. Pertaining to claim 8, Ohnuma teaches a manufacturing method of an active matrix device according to claim 3, wherein the active matrix device is a liquid crystal display.
11. Pertaining to claim 9, Ohnuma teaches a manufacturing method of an active matrix device according to claim 2, wherein the active matrix device is an electroluminescence display.
12. Pertaining to claim 10, Ohnuma teaches a manufacturing method of an active matrix device according to claim 3, wherein the active matrix device is an electroluminescence display.

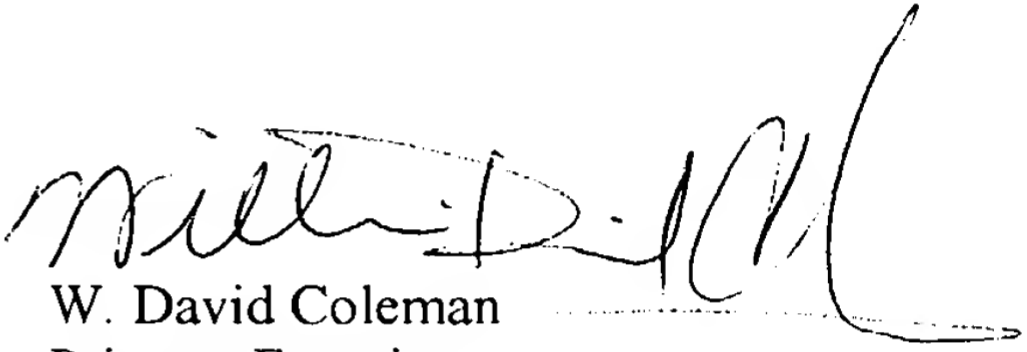
Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
14. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. David Coleman whose telephone number is 703-305-0004. The examiner can normally be reached on 9:00 AM-5:00 PM.

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16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

17. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



W. David Coleman
Primary Examiner
Art Unit 2823

WDC